



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/798,130

03/11/2004

Yin Leong Kwong

70040111-1

8795

7590

04/19/2006

AGILENT TECHNOLOGIES, INC.

Intellectual Property Administration

Legal Department, DL 429

P.O. Box 7599

Loveland, CO 80537-0599

EXAMINER

CARIASO, ALAN B

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

A

Office Action Summary

Application No.

10/798,130

Applicant(s)

KWONG ET AL.

Examiner

Alan Cariaso

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 5, 12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-11 and 16-19 is/are rejected.
- 7) ☒ Claim(s) 14, 15 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Receipt of applicant's amendment filed January 17, 2006 is acknowledged. Claims 1-20 are pending of which claims 1, 4, 5, 8, 9, 12, 13 and 17 are amended. It is noted that the each of the claims is missing its appropriate status, and any future listing of claims shall have the claim status pursuant of 37 CFR 1.121 (c)(2).

Claim Objections

2. Claim 6 is objected to because of the following informalities: Claim 6, line 1, "a color filter" has an incorrect article "a" and instead should be addressed with --the--, so as to refer to the same "color filter" in base claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2875

4. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by PASHLEY et al (US 6,127,783).

5. PASHLEY discloses a lighting system comprising: a mixing cavity (housing 18, diffuser 22) that mixes light (col.2, lines 27-31); an optical cable (28-fig.1, "optical fiber" col.2, lines 36-37) attached by extending or occupying the length of the space (fig.1) that forms the mixing cavity of the housing (18), a color sensor (photodiode 24) attached to the optical cable (28), the color sensor (24) sampling light from within the mixing cavity via the optical cable (col.2, lines 35-36), and a color controller (30) that controls light color within the mixing cavity (18), the color controller (30) using information from the color sensor as feedback about light color (col.2, lines 45-59) within the mixing cavity (18); wherein the optical cable (28) is a light guide not shielded from external ambient light (adjacent diffuser 22).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 6, 8-11 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over HOELEN et al (US 6,566,689 B2) in view of ANTILA (US 6,674,060 B2).

8. HOELEN discloses a lighting system comprising: a mixing cavity or mixing means (fig.3A, housing 128, col.15, lines 46-47) that mixes light (col.14, lines 61-66, col.15, lines 11-22 & 39-47), an optical cable or cable means (transmitting panel 101,111) attached to the mixing cavity (128), a color sensor or plurality of sensors (110,120) attached to the optical cable (101,111), the color sensor (110,120) sampling light from within the mixing cavity via the optical cable (101,111), and a color controller or control means (col.15, lines 51-57) that controls light color within the mixing cavity and that inherently uses information from the generated output signal from each photo sensor (110,120) as feedback about light color within the mixing cavity (128); wherein light emitting diodes (106,116) of a plurality of colors (fig.3B, col.15, line 67 to col.16, line 39) generate the light that is mixed within the mixing cavity (128), the plurality of colors including red, green and blue (col.16, lines 3-10); wherein the optical cable (101,111) is a light guide or light panel (col.14, lines 50-54) shielded (by reflector 122, housing 128 & LCD 125) from external ambient light.

9. However, HOELEN does not disclose each photo sensor having an integrated color filter located at least between the optical cable and the color sensor. ANTILA teaches at least one color balance sensor (13) comprising integrated red, green and blue units (13R, 13G, 13B) for the purpose of measuring the intensities of the main components of red, green and blue light (col.4, lines 56-59) at least from a connected photoconductor (12) and sending corresponding color signals (16R,16G,16B) to a controller (17,18) that control the light intensities of colored light (18R,18G,18B).

10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the color light system of HOELEN et al to include the type of integral color units of the color sensor photodiodes as taught by ANTILA in order to provide color values that enable comparison to reference values in order to improve color or white of the object's illumination (LCD 11).

11. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over HOELEN et al (US 6,566,689 B2) in view of ANTILA (US 6,674,060 B2) as applied to claims 1-3, 6, 8-11 and 17-19 above, and further in view of PASHLEY et al (US 6,127,783).

12. HOELEN nor ANTILA discloses a fiber optic cable. PASHLEY teaches an optical fiber (28-fig.1, col.2, lines 36-37) for the purpose of receiving light from plural colored light sources (10,12,14) and guiding the colored light toward a photodiode to sense the light intensity of all the LEDs. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the color light system of HOELEN et al to include the type of optical cable or optical fiber as taught by PASHLEY et al in order to receive and direct light to a photodiode while providing an arrangement of less space taken by optics and more taken by the plural colored light sources.

Allowable Subject Matter

13. Claims 14, 15 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Claims 4, 5, 12 and 13 are allowed.

15. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not suggest: the optical cable or cable means attached to the mixing cavity or mixing means by a substantially optically clear and transmissive epoxy; a neutral density filter located between the cable means and the sensor means, in combination with a plurality of photo sensors having an integrated color filter.

Conclusion

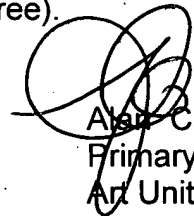
16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. BARETTA (US 5,831,686) shows colored LEDs (75,76,77), color sensors (21,22,23, fig.3) each with color filter (42) (col.7, lines 14-19). BEACH et al (US 6,969,843) shows LEDs (42,44,46, figs.1-2) directing light toward color sensors (54,56,58) with filters (154,156,158; col.14, lines 17-29).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Cariaso whose telephone number is (571) 272-2366. The examiner can normally be reached on 9-5:30 M-F.

Art Unit: 2875

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alan Cariaso
Primary Examiner
Art Unit 2875

April 16, 2006
AC